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1

VERIFICATION SUMMARY REPORT
PATENT APPLICATION

DATE:
TIME:

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GENERAL INFORMATION SECTION

3,<110> KATSUURA, MIEKO
4, KIMURA, MICHIO
6,<120> BONE MORPHOGENETIC PROTEIN ANTAGONIST BASED ON THE
7, MATURE PROTEIN
9,<130> 447.001
11,<140> US 09/806,368
12,<141> 2001-03-28
14,<150> PCT/IB99/01621
15,<151> 1999-10-04
17,<150> JP 10/288,103
18,<151> 1998-10-09
20,<160> 7
22,<170> PatentIn version 3.1

ERRORED LINES SECTION

STATISTICS SUMMARY

Application Serial Number: US 09/806,368
Alpha or Numeric: Numeric
Application Class:
Application File Date: 2001-03-28
Art Unit:
Software Application: PatentIN3.1
Total Number of Sequences: 7
Total Nucleotides: 0
Total Amino Acids: 845
Number of Errors: 0
Number of Warnings: 0
Number of Corrections: 0

SEQUENCE LISTING

<110> KATSUURA, MIEKO
KIMURA, MICHIO

<120> BONE MORPHOGENETIC PROTEIN ANTAGONIST BASED ON THE
MATURE PROTEIN

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Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
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Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
35 40 45

Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
50 55 60

Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
 65 70 75 80

Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
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His Pro Leu Tyr Val Asp Phe Ser Asp Val Gly Trp Asn Asp Trp Ile
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Val Ala Pro Pro Gly Tyr His Ala Phe Tyr Cys His Gly Glu Cys Pro
 35 40 45

Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile Val Gln
 50 55 60

Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Val
 65 70 75 80

Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu Asn Glu
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 <301> Wozney, JM et al.
 <302> NOVEL REGULATORS OF BONE FORMATION MOLECULAR CLONES
 AND ACTIVITIES
 <303> SCIENCE
 <304> 242
 <305> 4885
 <306> 1528-1534
 <307> 1988-12-16
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 <309> 1994-10-31

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Ser Pro Lys His His Ser Gln Arg Ala Arg Lys Lys Asn Lys Asn Cys
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Arg Arg His Ser Leu Tyr Val Asp Phe Ser Asp Val Gly Trp Asn Asp
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Trp Ile Val Ala Pro Pro Gly Tyr Gln Ala Phe Tyr Cys His Gly Asp
 35 40 45

Cys Pro Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile
 50 55 60

Val Gly Thr Leu Val Asn Ser Val Asn Ser Ser Ile Pro Lys Ala Cys
 65 70 75 80

Cys Val Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu
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<301> OZKAYNAK, E. et al.
<302> OP-1 cDNA encodes an osteogenic protein in the TGF-beta.
<303> EMBO J.
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<306> 2085-2093
<307> 1990-07-01
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<309> 1994-10-31

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Ser Thr Gly Ser Lys Gln Arg Ser Gln Asn Arg Ser Lys Thr Pro Lys
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Asn Gln Glu Ala Leu Arg Met Ala Asn Val Ala Glu Asn Ser Ser Ser
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Asp Gln Arg Gln Ala Cys Lys Lys His Glu Leu Tyr Val Ser Phe Arg
35 40 45

Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala Pro Glu Gly Tyr Ala Ala
50 55 60

Tyr Tyr Cys Glu Gly Glu Cys Ala Phe Pro Leu Asn Ser Tyr Met Asn
65 70 75 80

Ala Thr Asn His Ala Ile Val Gln Thr Leu Val His Phe Ile Asn Pro
85 90 95

Glu Thr Val Pro Lys Pro Cys Cys Ala Pro Thr Gln Leu Asn Ala Ile
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Pro Leu Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala
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Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
 20 25 30

Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
 35 40 45

Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
 50 55 60

Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
 65 70 75 80

Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
 85 90 95

Ile Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val
 100 105 110

Val Glu Ser Cys Gly Cys Arg
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Arg	Cys	Ser	Arg	Lys	Ala	Leu	His	Val	Asn	Phe	Lys	Asp	Met	Gly	Trp
			20				25						30		

Asp	Asp	Trp	Ile	Ile	Ala	Pro	Leu	Glu	Tyr	Glu	Ala	Phe	His	Cys	Glu
		35				40						45			

Gly	Leu	Cys	Glu	Phe	Pro	Leu	Arg	Ser	His	Leu	Glu	Pro	Thr	Asn	His
		50			55				60						

Ala	Val	Ile	Gln	Thr	Leu	Met	Asn	Ser	Met	Asn	Pro	Glu	Ser	Thr	Pro
		65			70				75			80			

Pro	Thr	Cys	Cys	Val	Pro	Thr	Arg	Leu	Ser	Pro	Ile	Ser	Ile	Leu	Phe
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Ile	Asp	Ser	Ala	Asn	Asn	Val	Val	Tyr	Lys	Gln	Tyr	Glu	Asp	Met	Val
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Val	Glu	Ser	Cys	Gly	Cys	Arg
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<223> Mature MP52 protein. Note : 32nd and 35th Trp are modified to allylsulphenyl Trp.

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1				5				10					15		

Arg	Cys	Ser	Arg	Lys	Ala	Leu	His	Val	Asn	Phe	Lys	Asp	Met	Gly	Trp
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20

25

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Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
35 40 45

Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
50 55 60

Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
65 70 75 80

Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
85 90 95

Ile Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val
100 105 110

Val Glu Ser Cys Gly Cys Arg
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